JUNE 84

SINCUS NEWS

SINCUS MEETINGS: WED. JUNE 20 VESTAL LIBRARY
WED. JULY 18 VESTAL LIBRARY

SINCUS PICNIC: SUN. JULY 22 GLENDALE PARK

SINCUS NEWS P.O. Box 523 OWEGO, NY 13827

POKEs by PAUL

HI RES by Richard Taylor,PRISM
A machine code graphic utility that will knock your socks offafter watching the ART on the old ZX81yTS1000yTS1500.
A 255 x 191 pixels,thatis over 48,700 tiny little pixels that you can control...more or less every one of them.
You plot the tiny pixels, design your shape, draw it or have the computer do it for you.
With x,y,z plots you can have 3d.
You can design your own characters, your own alphabet, and make the characters move about.
4 Sounds too good...well, it does a lot for the money,and does it well.
There are a couple things you cant do and COPY and LPRINT are a couple.
Some pixels are wider than others,and others dont print at all.
minor glitches in a superb piece of programming.
The resolution does look better than that of the 2068.
I had tried to show a demo program at the May meet, but it crashed everytime.
I forgot to POKE in a number to lower RAMTOP.
Ii ll have it at the JUNE meet.
I am getting jammed up with programs to review for the 1000 and just got my NEW 2068,the grass keeps growing, and overtime at work always picks up in the summer.
ZXLR8 by G. Russell Electronics is one wow program.
first you calibrate your recorder with the first program, and then you can run the ZXLR8 at the fastest speed your recorder can error free load.
A recorder with aligned heads can do 16K load in 60 secs.
You can save DATA,graphics and numbers.
Between the HI RES and the ZXLR8 you almost have what the 2068 can do.

END OF REVIEWS

GOOD NEWS from Gary Ennis, on the TIME STAR 2068, I know we all wish these people well,and that the whole industry continues to thrive.
We were probably one of the first to get this news.
The May meet saw the slate of nominees become the next yearl s officers.
President..Gary Ennis
vice president..Gary Cole
Treasurer..Glenn Wilson
Financial Secty..G. Knickerbocker

Recording Secty..Paul Hill
Trustee..Richard Petrak
Trustee..John Sims
Wes Brzozowski gave an interesting talk on the loading procedure of the 2068,and how it effects making the prized Backup tapes.
Now that some programs cost in the 50 dollar range, you want some protection of your investment.
Recorder to recorder potential was also featured.
Many ideas are starting to come into bloom,the modem project,the chess matches and the sales of tapes and paper.
We are rapidly becoming a 2068 computer group,but lets not forget the 1000s,we need your input as well as everyone elses.
New members coming in with the 1000 need as much help as we did last year about this time.
I would like to get a couple volunteers to copy the SINCUS charter,programming tips, and back features of the SINCUS NEWS.
This would be given to all new members,either a taped copy or hard copy.
Anyone out there with a fullsized keyboard with lots of time to kill,see me.
SINCUS gets mail from users around the globe.
Latest from Carayaca,Venezuela.
Thanks to Stan Livingston and Mrs. Richard Petrak,and the spanish dictionary, we got the letter and reply translated.
When you think of the problems we have getting programs and computer parts, imagine the problems in other parts of the world.
Welcome to the new members,tell your friends about us,and bring them to the next meet.JUNE 20 and JULY 18 BE THERE.

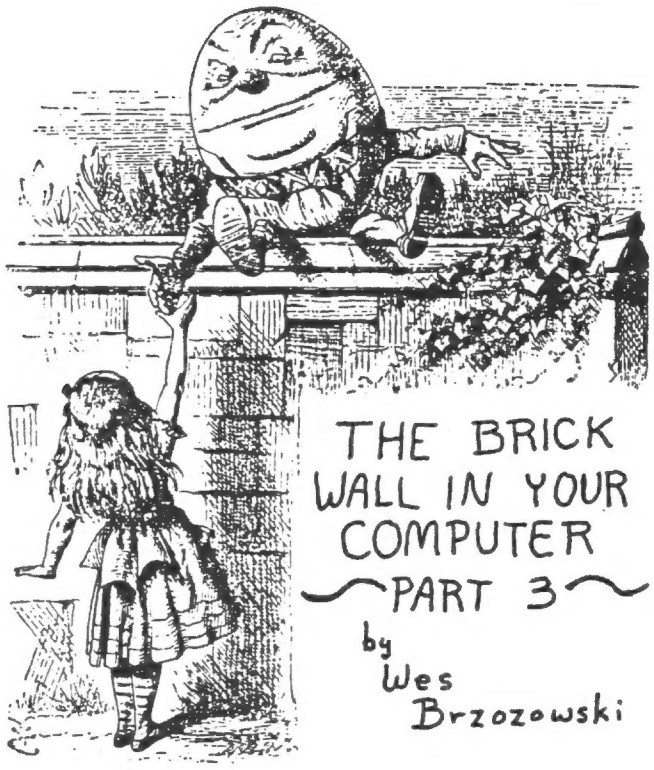
here is a few puzzles to chew on...the following letters are based on different forms of progression,see if you can finish each one.

1.s,s,e,n,t,e....
2.W,T,F,S,S....
3.D,N,O,S,A....
4.c,d,y,m,d....

If you have a bucket with 700 dollars worth of silver coins,and it is in quarters,half dollars and dollars,there being an equal number of each.
how many of each are there.
thanks,to creative computing,Dec. 1980 for the ideas.

another user group heard from, make that two groups, 1. is from the north Jersey ZXyTS Users Group,L.W.Burkhart,133 Christopher St.Montclair,NJ, 07042.
They are interested in keeping the 81s1000s going,and want to buy,sell,swap hard soft WARE.
2.COATS,Clackamas County Area T s Users Group, sent us their newsletter,and we sent them one of ours.
Copies of newsletter swaps will be posted on the bulletin board for all to read.

Paul Hill



THE BRICK WALL IN YOUR COMPUTER ~PART 3~

by Wes Brzozowski

"When I use a word", Humpty Dumpty said in rather a scornful tone, "it means just what I choose it to mean—neither more nor less."

"The question is", said Alice, "whether you can make words mean so many different things."

"The question is", said Humpty Dumpty,"which is to be master, that's all."

Lewis Carroll's
THROUGH THE LOOKING GLASS

In the last two parts of this discussion, we've seen that the computer is master when it comes to interpreting numbers; if it chooses to ignore reality, there's nothing that we can do about it. Our only defense is to be aware of the computer limitations and avoid them however we can. If we don't, the results can be just as mad as the things Alice saw behind the looking glass or down the rabbit hole.

One cause of the "BRICK WALL" is the fact that the computer uses only a limited number of digits to express a number. Any extra digits in a result just get "chopped off". Last time we saw that changing the order of a multiplication and division could determine whether or not the two numbers were interpreted as equal. Since that could determine the outcome of a program, it's a concern. With that in mind, let's define:

BRICK WALL RULE NUMBER 1:

Avoid using = or <> with numbers in an IF statement. [It's OK for strings].

If you only use integers, and then only do adds, subtracts, or multiplies [no divides!] you can probably ignore this rule. Ignoring it in any other case could be trouble. Instead of saying IF A=B THEN ... you might say IF ABS[A-B] < .0001 THEN... which not only passes if A=B, but also if A and B are within .0001 of one another. You can, of course, modify this for whatever tolerance you need.

Interestingly enough, the problem we did last time only "fouled up" the TS1000, not the TS2068. The TS2068 already has a small tolerance built into it, but it's not hard to find instances where this "fix" causes problems of its own. First, let's look at a case that will confound both machines.

In the first part of the series we found that:

```
1  FOR J=10000000000 TO 10000000010  STEP
2
2  NEXT J
```

runs in a flash, but if we change the STEP 2 into STEP 1 it runs forever [on both machines!]. In decimal, the machine can fairly accurately represent numbers that are about 10 digits long. If we go too much larger, the less significant part is just chopped off. The numbers in our FOR/NEXT loop are 11 digits long, and are in the "danger" zone. The number 2 is just barely large enough to be added to those numbers without being chopped off; the number 1 is not. Thus, adding 1 gives the same result as adding 0, which means that the final count is never reached. This brings us to:

BRICK WALL RULE NUMBER 2:

Be careful when you mix very large and very small numbers.

The next problem can demontrate both the "round off" error in the TS2068 that we already did for the TS1000, and also a new problem, not seen before. For either machine, ENTER:

```
10  LET A=1
20  LET B=A
30  LET C=4
FOR J=1 TO C
50  LET A=A/3
60  NEXT J
70  FOR J=1 TO C
80  LET A=A*3
90  NEXT J
100 PRINT A,B
110 IF A=B THEN PRINT "EQUAL"
120 IF A<>B THEN PRINT "NOT EQUAL"
```

What the program does is divide 1 by 3, four times, and multiplies it back by 3, four times. Mathematically, A still equals B in the end. Running it gives us "1 1 EQUAL" as a result. So far so good.

Now let's foul up the 2068. Change line 30 to LET C=5, and satisfy yourself that this shouldn't change the result. We simply multiply and divide 5 times, instead of 4. The multiplies and divides should still cancel, and A should still equal B at the end. If this is run on the TS1000 the result will be "1 1 EQUAL", which is correct. A TS2068 will give "1 1 NOT EQUAL". Notice that it rounded A up to 1 and printed it on the screen, even though it is slightly less than 1 in the machine. Here's an instance where the 2068 gives a round-off error more easily than the TS1000! The reason for the error is the round-off type, like we demonstrated last time on the TS1000, but not the 2068! Now we've evened the score!

The program becomes more interesting though, when we change line 30 to LET C=100. This time, for either machine, the result is "0 1 NOT EQUAL". I think we can agree that "0" is not equal to "1", but how did A get to be 0? In lines 40 throught 60 we did 100 occurances of dividing A by 3. This is the equivalent to dividing A by 3 to the 100th power. Although it's not obvious because the program uses fairly small numbers, this is just a bit larger than 5 followed by 47 zeros. This is a very lage number and dividing A by it produces a very small number. Since the computer uses only a limited number of digits, the best it can do is to select a number that's close to the answer. In this case the quotient is rounded down to zero. Then, in lines 70 through 90, when we try to compensate by multiplying by 3 to the hundredth power, we get no satisfaction, because multiplying anything times zero still gives us zero. There's that old brick wall again! This is really a violation of rule number 2, but it is so subtle that it deserves a new rule:

BRICK WALL RULE NUMBER 3:

If possible, arrange the order of your program steps to keep your variables from changing any more widely than they have to.

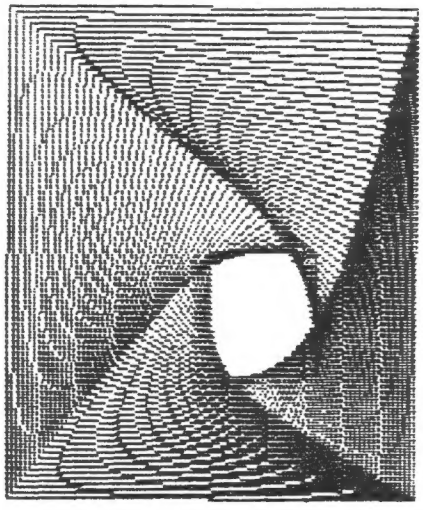
In this case, we could have alternated the multiplies and divides. It would not only have simplified the program, but A would never have gotten less than about 1/3. It may not have given us equal as a result, but if we applid RULE NUMBER 1, we could have fixed that, as well. If we try to apply all of the rules at once, the proram works.

This pretty much conclues my dicussion on computer number resolution and limits as they apply to our machines. It is by no means complete; it merely serves as a starting point for those who are interested in accurate programs [and who don't like suprises!]. For those who have followed this series to the end and would like to know more, I'll be glad to discuss the subject with you at any SINCUS meeting. In the meantime, I hope my 3 "RULES" might help to make life just a bit easier.

WES BRZOZOWSKI
SINCUS

```
 10 LET x=0
 20 LET y=0
 30 LET j=0
 40 FOR i=172 TO 0 STEP -4
 50 LET j=j+1
 60 LET x=x+2
 70 LET y=y+2
 80 PLOT x,y
 90 DRAW j,i
100 DRAW i,-j
110 DRAW -j,-i
120 DRAW -i,j
130 NEXT i
```

2068 FUN



TIMEX 14 TiPS

WWII WORD SYNC II THIS IS ON THE SCREEN

[illegible]15 BY [illegible] DURING MY FIRST ATTEMPTS TO MAKE A [illegible] BOARD FROM A NEGATIVE, I LEARNED THAT DIRECTIONS CAN BE INCOMPLETE AND MISLEADING. WHAT FOLLOWS IS MY METHOD. I DERIVED IT BY TRIAL AND ERROR OVER THE COURSE OF MANY NIGHTS.

THE NECESSARY CHEMICALS CAN BE PURCHASED FROM [illegible] AND THEY ARE: [illegible] "B" [illegible] ALSO RECOMMEND BUYING A BOTTLE OF DENATURED ALCOHOL FROM ANY DRUG STORE. THE COPPER CLAD BOARDS CAN BE BOUGHT FROM [illegible] OR FROM [illegible]. THE ONLY OTHER ITEMS WHICH MOST POPLE DON'T GENERALLY HAVE ARE DRILL BITS THAT ARE SMALL ENOUGH. TO MAKE THE CONNECTOR WHOSE DIRECTIONS FOLLOW, A DRILL BIT .093" DIAMETER [illegible] 42[illegible] IS NEEDED FOR THE ALIGNMENT PINS. I HAVE MADE AN EXTRA NEGATIVE OF MY [illegible]/SINCLAIR 1000 CONNECTOR AND HAVE PUT IT IN THE [illegible] LIBRARY FOR ANYONE WHO WANTS TO BORROW IT. [illegible]AKING A NEGATIVE IS A SIMPLE PROJECT ALSO[illegible]. FOR THIS CONNECTOR, A DOUBLE SIDED COPPER CLAD BOARD IS NECESSARY. SIX SIMPLE STEPS ARE INVOLVED IN MAKING THE CONNECTOR; [illegible], [illegible], [illegible], [illegible], AND [illegible]. IT IS MUCH EASIER THAN IT SOUNDS!

****

AFTER 40 - TWO THINGS START TO HAPPEN

1) YOU START FORGETTING THINGS...

BUT THIS IS WHAT IT PRINTS — ZX-81!!!

FROM NEGATIVE TO PC BOARD

by GLENN WILSON

PREFACE

During my first attempts to make a PC board from a negative, I learned that directions can be incomplete and misleading. What follows is my method. I derived it by trial and error over the course of many nights.

The necessary chemicals can be purchased from UNICORN ELCTRONICS and they are:

TYPE "B" ETCH RESIST SENSITIZER

"NEGATIVE TYPE" PC BOARD DEVELOPING SOLUTION

PC BOARD ETCHING SOLUTION

I also recommend buying a bottle of denatured alcohol from any drug store. The copper clad boards can be bought from UNICORN ELECTRONICS or from RADIO SHACK. The only other items which most pople don't generally have are drill bits that are small enough. To make the connector whose directions follow, a drill bit .093" diameter [# 42] is needed for the alignment pins.

I have made an extra negative of my TIMEX/Sinclair 1000 connector and have put it in the SIMCUS library for anyone who wants to borrow it. [Making a negative is a simple project also]. For this connector, a double sided copper clad board is necessary. Six simple steps are involved in making the connector; PREPARATION, SENSITIZING, EXPOSING, DEVELOPING, ETCHING, and FINISHING IT. It is much easier than it sounds!

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PREPARATION

Cut one of the double sided boards to about 2 3/4" by 6". Lay the negative on the board and mark the holes. Remove the negative, prick punch and drill the two holes to .093" [# 42]. Debur the holes, and using fine steel wool, polish both sides of the board. Clean it with denatured alcohol and "Kleenex" type paper. Let it dry.

SENSITIZING

You can try the directions on the can, but I do something entirely different: put two pieces of 3/32 diameter brazing rod [some of which I've left with the negative] in the two holes. Hold the board vertical and spray one side very heavily and continue holding it until most of it has run down to one edge leaving a thin uniform coating on the surface. Wipe the bottom edge off and place in a very flat position in a very dark cupboard for 4 hours or more. Take the board out and repeat the same process on the other side, not expoing it to sunlight. A small amount of incadescent light doesn't bother it much.

EXPOSING

Place the negative on the board over the alignment pins emulsion side down [shiny side up!]. Place a piece of glass on top of it to hold it flat. [I even put a cold chisel on each side of it to hold it flat.] If it is not flat against the board, unsharp edges will result. I expose my boards to two Sylvania germacydal G8T5 lamps placed about 1 1/4" high. These can be bought from WHOLESALE ELECTRIC and should not be looked at while on!!! Incidentally, these make an excellent EPROM eraser. I am sure the sun, what little of it we get in Broome County, will expose it fine. Ten minutes with the G8T5 lamps works well. I am not sure how long the sun would take. I do know that longer than necessary will hurt it providing the opposite of the board does not become exposed in the process. The second side should be exposed like the first with the same negative by flipping the board end over end under the negative.

DEVELOPING

Using a glass pie plate or other suitable container, pour enough developer in it at room temperature to coat the board. Submerge the board for 2 minutes. 1 1/2 is too short, and 2 1/2 is too long! Every so often, flip it over or hold it off of the bottom so that both sides get developed evenly. After 2 minutes, rinse it for another couple of minutes in water nearly the same temprature. Running water or even abrupt movements in still water may wash off your image-be gentle! The board is now no longer light sensitive. Being careful not to touch the image, lean it up against something to dry. I have noticed that the developer may be used several times.

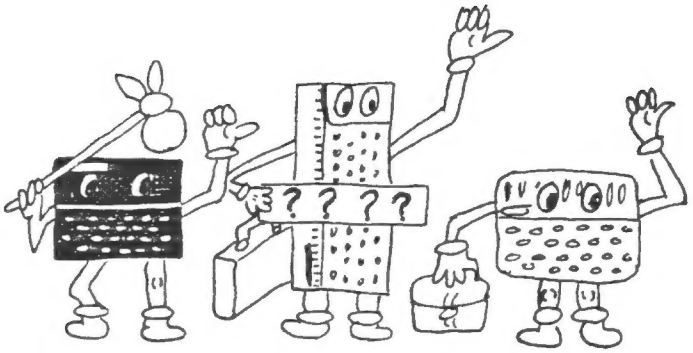
ETCHING

The instructions on the bottle say 1/2 to 2 hours. I find that if I heat the etching solution so that it is warm to the touch, it takes from 10 to 20 minutes. Put a generous amount of etching solution in the plate I have found three variables effect the etching time: one is temperature , the second is amount of solution, and the third is agitation. I agitate the board continuously being careful not to rub off the image until all unwanted copper has been washed off. Rinse in running water.

FINISHING

Let it dry if so desired. Cut to size and drill the connector holes with an approprite drill. Cut the slot. Debur and polish with a fine steel wool to remove the etch resist. VOILA That wasn't bad, was it?

GLENN WILSON



WHERE DO WE GO FROM HERE?
-Wes Brzozowski

With the sudden disappearance of numerous hardware and software vendors, with SYNC gone, and the reintroduction of TIMEX-Sinclair User seeming less likely with each passing day, it may seem as though the entire third party market has fallen apart. Nothing could be further from the truth.

It is certainly unlikely that the market will ever flourish as it did in it's heyday, but lots of people will still be thrilled to provide you with support.

In the area of hardware, look to Byte-Back and Zebra [addresses in previous issues of SINCUS NEWS].

Sinware [of Hot Z, et all is still alive and kicking, and has a TS2068 version of Hot Z that's quite nice, despite some bugs]

A real pleasant surprise is RAMEX, 48945 Van Dyke Road, Utica, Michigan 48087. These folks have been around for a while, having run a highly unimpressive series of ads in SYNC. Their catalog makes up for all of that! Besides offering their own very complete line of hardware and software for both TS1000's and TS2068's, they're offering quite a number of 2068 products that were originally designed for the Spectrum in England. These include the Richard Shephard adventure games line, numerous arcade and adventure games by Quick Silva, and the Tassman hardware and software for word processing. If these people can actually ship what they're offering, theirs is definitely a catalog to have. Get one![ED note-I mailed an order for Tasword on May 22 and, received the software on June 4!!!! I have ordered 4 more programs and hopefully they will arrive in time for the June meet.]

Speaking of England, ECC Publications in London would be very pleased to send you any or all of their magazines, Sinclair User, Sinclair Programs, or Sinclair Projects. [The club library has a copy of each; check 'em out!] Their overseas rates aren't cheap, but the mazines are of high quality. Their Spectrum programs look like they should run on a TS2068, and the ZX-81 programs will, of course, run on the TS1000. TS1000 owners should recognize these magazines as a source of additional ZX-81 product vendors. My request for their overseas rates, along with some additional questions brought an incredibly fast, personal reply. These could be very nice people to do business with, and they still plan to be around for a while. Now the bad news; their overseas rates are about twice their domestic rates:

SINCLAIR USER [monthly]
28 pounds per year

SINCLAIR PROGRAMS [monthly]
30 pounds per year

SINCLAIR PROJECTS [bi-monthly]
10 pounds per year

Yes, folks, that is British POUNDS. That is what they prefer for money over there. With the exchange rate being about $1.50 per pound, it's a heavy sum indeed. They'll be glad to charge your credit card, at whatever the current exchange rate is, otherwise, you'll probably have to find a bank that can give you a cheque drawn on Pounds Sterling. If you decide to send for a subscription, the overseas postage on your 1/2 ounce envelope [!] [one sheet of paper in a business size envelop will make it!] is 40 cents.

ECC PUBLICATIONS LIMITED
196-200 Balls Pond Road
Islington London N1 4AU

Among the remaining American publications, SYNTAX is still going. Articles tend to be short, with extraneous material cut out, so compressing a lot of information into a very small space. They seem to do well in covering a wide range of interests, from helping the beginner figure out how to turn the machine on, to in depth technical information. There is usually one page of actual news, and another of information on what various vendors are doing [very useful these days]. The rest is articles, programs, reviews and ads. Though it is a small publication, I,ve alwayfs considered it one of the best. Just lately, they have begun to offer six month as well as 1 year subscriptions. They publish monthly.

SYNTAX
P.O. 2, Box 457
Harvard, MA 01451.

$29 per year

They deserve our support and we need their service.

Two new publications are available, but I've not seen either one. If anyone has, please let us know what you think. The first is TS NEWS, 67 Elm Street, Camden, Maine 04843 [monthly $29 per year]. The second is called BASIC, 3705 Biscayne Boulevard, Miami., Florida 33137 [$12.95 per year, and if you enclose an

original, usable program, you get an additional 6 issues free!. Once again, I've nt seen either one, and can't vouch for their quality.

And, in the "Last But Not Least" category, let's not forget KNIGHTED COMPUTERS, which has been gracious enough to take out ads in our newsletter. They've got a good line of both hardware and software, and are our closest equivalent to a local dealer. Let's give them our support.

Now for a couple of questions to the audience. There was, in the not too distant past, a newsletter formatted publication called TS USER [not to be confused with the magazine TIMEX-Sinclair User]. It seems it was about 4-8 pages in length, offset printed on tan paper, and quite nicely done. Does anyone know if it is still around?

Secondly, Melbourne House, a vendor based in England, and quite active there seems to have vanished from the American scene. They've produced what has been regarded by many as the ultimate adventure game, called THE HOBBIT, for the Commodore 64, as well as several British computers, such as Oric, Dragon, and, most importantly to us, the ZX Spectrum. Does anyone know if the Spectrum version will run on a 2068 [some Spectrum tapes will] or if a 2068 version was ever produced?

If anyone has the a??nswer to either of these questions, or knows of other publications or products that might be worth mentioning here, please let me know. I'll make sure that the word gets spread around.

In the meantime, there is no need to be mourning for the loss of the third party market; it is still there. If we want to look to some sort of silver lining we should reflect on the fact that there's been an awful lot of garbage sold out there. This shakeup is really removing those who shouldn't have been in the market in the first place. Unfortuntely, there are also some quality products that will never return. This we will have to live with. Don't forget that the information you read here is already a month old. [ED-NOTE-we try to edit it to make sure it is up to date and only three days old when you get it!!!] While some vendors will probably last a while, others may go under unexpectedly. So if you're interested in a product, now is the time to buy, and don't forget to share your knowledge and information with us. The more we all know, the stronger our group will be, and the longer it will last.

WES BRZOZOWSKI

- 2068 -

```
10 FOR f=0 TO 65 STEP .1
20 PLOT 2*f*SIN f+125,f*COS f+
88
30 NEXT f
```

- 2068 -

```
10 FOR f=0 TO 254
20 PLOT f,30*SIN (f/10)+88
30 DRAW 10,10: DRAW -10,5
40 NEXT f
```

- 2068 -

```
 25 BORDER 0: PAPER 4: INK 1: C
LS
 50 FOR f=0 TO 254
 60 PLOT f,30*SIN (f/10)+88
 65 DRAW 0,175-(30*SIN (f/10)+8
8)
 70 NEXT f
```

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P.O. Box 36
Johnson City, New York 13790

Any correspondence or articles should be sent to

Gary Emmis
Editor, SINCUS NEWS
P.O. Box 523
Owego, New York 13827

2K EXPRESS

by Gary Ennis

EDIT on Paul Hill

PAUL HILL has been the main force that has kept SINCUS going through it's first two plus years. Many will remember Paul started collecting names of people interested in that "ZX-81" at UNICORN ELECTRONICS. How long has Paul been actively promoting SINCUS? Well UNICORN was in the small mall in those days and most of you, if you had a ZX-81, were wondering how to get a 16K RAM! There were rumors you might be able to get a 64K RAM next year. The new TIMEX-Sinclair 1000 computer, selling for $99, was a hot seller. 16K RAMS were hard to come by [TIMEX reportedly built one RAM for every four computers!] and the rumor mill said you might be able to get one of those Sinclair thermal printers in a few months. It was in this atmosphere that Paul Hill led the drive to organize a local users group. His tenure as President has been very productive and today's lively group is due largely to Paul's commitment to the club. So Paul, on behalf of the entire membership of SINCUS, I would like to publicly thank you for the effort and devotion that you have made on behalf of the club. And now that you are just Recording Secretary [and take care of meeting minutes, arrange for the meeting room, write a monthly column, and maintain the club correspondence] - your wife has a question about the hot water heater!!!!

GOTO The next two meetings!

At the June meeting we will have:

1) Attaching a keyboard to a ZX-81

2) ZX-81 HI RES software

3) TEXTWRITER 2000

A word processor for the 2068

4) MODEM demonstration using COMPUSERV

SAVE Sunday, July 22

July 22 is the date of the first SINCUS picnic!! Pavilion #3, Glendale Park, Glendale Road, Endicott. [see map in this newsletter]. Club is providing charcoal, paper plates, napkins. You bring a dish to pass, silverware, beverage [we have a beer permit], your main meat, and a small donation to defer expenses. In exchange for your donation [in increments of $.25] a copy of your membership will be placed in a box, from which names will be drawn for door prizes-namely software for both the ZX-81 and 2068!! BEST OF ALL - your entire family is welcome. We are not sure if we will be playing softball, but we will have two 2068's there running a variety of entertaining programs. Yes, we will have electricity!

FOR the Chess Players

Saturday, June 2, was a fun time. Several members showed up a Star Dry Cleaners in Owego where we had set up 2 ZX-81's and two 2068s. ZX-81 #2 [running Master Chess] defeated ZX-81 #1 [running TIMEX Chess] in, I believe 57 moves. 2068 #1 [running SOFT SYNC's Voice Chess] defeated 2068 #2 [running TIMEX Chess-actually PSION's Master Chess] in 27 moves. Much thanks to Ted Koranye who dreamed up this idea and coordinated this day's activities. We are now going to plan a "CHESS CHALLENGE" in the fall to promote the visibility of the club. All computer clubs and chess clubs will be invited to participate. BUT, it is machine vs. machine [more correctly software vs. software!], no humans are allowed to play the computers. You can bring a computer or a "computerized chess game". Watch for more details in the months ahead. OF COURSE, I accept volunteers to help put it on.

USR Group Exchanges

We received a tape from Cincinnati with a data file of the user groups in the US, that runs on VU-FILE. We owe them a response, and yes, Rick Johnson, it is in the works. I will have it to you by July 1.

Another response to my article about a network to distribute information to users came from the Boston Computer Society where a list of user groups is being kept. Thanks to SYNTAX for a personal response. A special thanks to KNIGHTED COMPUTERS, who in addition to their advertising have donated two pieces of 2068 software [win one at the picnic "GIFT TABLE"]. Also got a personal answer from Tom Woods and DATACOM. My thanks to these companies. You can see this correspondence on the club bulletin board [another of PaulHill's jobs now that he is retired]

If any user group wants to try the chess challenge idea, we strongly urge you to have a trial run-some very confusing things can come up. We finally decided that the two computers would be back to back. The operator would announce the move his/her computer was making. The other operator would then enter that move in his computer. A third person would make the appropriate move on a chess board that was set up between the computers-so the kibitzers could see what was going on. Games could be saved and then [from a printout of the moves] a midgame situation could be entered to the computers to let them play out the game [to the same result?]. Challenge all those guys-see who will haul their PC down and take the chance of being humiliated by the "black box"!!

NEW in Club Communications:COMPUSERV

I have a 2050 modem [and enthusiastically endorse its purchase] and subscribe to COMPUSERV. This means for SINCUS members and other groups around the country you can reach me using E-MAIL. You can find my personal information listed in the Subscriber's Directory [LOGON and GO PCS-8 [I think, I am separated from my COMPUSERV manual right now!]. You may use MOM-4 also, I think. Well veteran COMPUSERVers will know how and for you new guys, why do you think you get 5 free hours - it's to figure stuff like this out! Can you see the day when all you authors can file your newsletter articles with the Editor using E-MAIL!

NEW The Hardware Subgroup

A subgroup of people interested in building hardware is being formed. It will have a definite meeting schedule and place, once a project is scheduled. There will be more on this at the meeting.

RETURN All Library Materials

Please return all library materials so we can figure out what we have and what we need.

NEW -TELECOMMUNICATIONS Subgroup

I will asking those people with modems to form a subgroup and develop a club communications network. Personally, I will, if the hardware hackers can teach me to solder, be building [?] a modem. This will permit me to maintain a twenty-four hour a day bulleting board - one on at home when I'm at work, then on the work phone when I am home. But we are going to need software, etc. so we can easily get printouts, make saves & loads, and etc.

PLOTting A Course for SINCUS

Looking ahead to this summer and next fall, SINCUS is alive and well and moving. As the new President I would like to publicly acknowledge the immediate past board of directors for their active leadership and commitment to SINCUS. I welcome John Sims and Gerry Knickerbocker to our board and look forward to working with them in the months ahead. For the membership, look forward to more produtive time at the meetings. The meetings are getting so full of activities that we will be consciously structuring them so everyone gets a fair chance. We do ask your participation in ASKING QUESTIONS. Often in small group "bull sessions" questions are raised that the entire group would benefit from hearing. With this in mind, we will be providing a QUESTION/ANSWER PERIOD. Please fire away. Also, we are looking for ZX-81 demos. I know the 2068 is exciting, but the ZX-81 [this newsletter is still produced using WORD SYNC II on a ZX-81] is still a very viable computer. Its only drawback is color. Well who needs to see their checkbook in color, plus when you only have one color TV what color does your computer compute in when the kids want to see "THE "A" TEAM"? See you there!

GARY EVANS
President
SINCUS

```
   1 REM RICK JOHNSON CINCINNATI
OH. T/S GROUP SCREEN DISPLAY
  10 INK 9: PAPER 6: BORDER 4: B
RIGHT 0: OVER 0: INVERSE 0: CLS
  20 RESTORE 30: FOR b=0 TO 7: R
EAD a: POKE USR "k"+b,a: NEXT b
  30 DATA 0,0,0,60,66,255,129,25
5
  40 RESTORE 40: FOR b=0 TO 7: R
EAD a: POKE USR "l"+b,a: NEXT b
  50 DATA 0,0,0,15,16,63,32,63
  60 RESTORE 60: FOR b=0 TO 7: R
EAD a: POKE USR "c"+b,a: NEXT b
  70 DATA 0,0,0,255,0,255,0,255
  80 RESTORE 80: FOR b=0 TO 7: R
EAD a: POKE USR "r"+b,a: NEXT b
  90 DATA 0,0,0,240,8,253,4,253
  95 PLOT 70,90
 100 RESTORE 1000
 110 FOR b=1 TO 8
 120 READ x,y,r
 130 DRAW x,y,r
 140 NEXT b
 150 RESTORE 1020
 160 PLOT 65,80
 170 FOR b=1 TO 8
 180 READ x,y,r
 190 DRAW x,y,r
 200 NEXT b
 210 CIRCLE 180,150,6
 220 CIRCLE 180,130,6
 250 PRINT AT 15,4,"a a a a a a
a a a a"
 260 PRINT AT 16,3;"a a a a a a
a a a a"
 270 PRINT AT 17,4;"a a a a a a
a a a "
 280 PRINT AT 18,2;"a a a a a a
 a a a a a"
 290 PRINT AT 19,5;"
 300 PLOT 3,12
 310 RESTORE 320: FOR b=1 TO 17:
 READ x,y: DRAW x,y:: NEXT b
 320 DATA 249,0,0,-10,-249,0,0,1
0,25,42,200,0,25,-42,-40,0,-20,4
2,35,0,-13,20,-174,0,-13,-20,2,3
,196,0,-3,5,-190,0
 350 OVER 1: PRINT AT 13,6;"T S
2068"
 400 PRINT AT 3,9;"I LOVE MY";AT
 5,9;"TIMEX/";AT 6,12;"SINCLAIR"
;AT 8,10;"COMPUTER"
1000 DATA 80,0,0
1002 DATA 10,10,1.57
1004 DATA 0,50,0
1006 DATA -10,10,1.57
1008 DATA -80,0,0
1010 DATA -10,-10,1.57
1012 DATA 0,-50,0
1014 DATA 10,-10,1.57
1020 DATA 120,0,0
1022 DATA 15,15,1.57
1024 DATA 0,55,0
1026 DATA -15,15,1.57
1028 DATA -120,0,0
1030 DATA -15,-15,1.57
1032 DATA 0,-55,0
1034 DATA 15,-15,1.57
9990 STOP
9999 SAVE "T V" LINE 1: BEEP 1,3
3
```

2068 FUN